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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Marc M. Baum

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DALINA LAW GROUP, P.C.
7910 IVANHOE AVE. #325
LA JOLLA, CA 92037

EXAMINER

KURTZ, BENJAMIN M

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/719,924	Applicant(s) BAUM ET AL.	
	Examiner BENJAMIN KURTZ	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21,54,55 and 60-78 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21,54,55 and 60-78 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 74 and 75 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The applicant has failed to provide sufficient enablement for what the structure of the meteorological station is, what kind of data and how such data is enabled in the control function.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 60 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 60 recites the limitation "said storm drain collection location" in line 4-5.

There is insufficient antecedent basis for this limitation in the claim. For examination purposes the storm drain collection location is assumed to be the storm drain inlet.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 78 is rejected under 35 U.S.C. 102(e) as being anticipated by Ghalib US 6 503 404.

Regarding claim 78, Ghalib teaches a wet and dry weather water disinfection system comprising: a storm water management infrastructure comprising an urban street storm sewer comprising an inlet flowingly coupled to a receiving body of water, a disinfecting chemical dispenser (27) located inline to the storm water management infrastructure where said disinfecting chemical dispenser is configured to dispense disinfectant chemical into water flowing through the system, a sensor (30) to measure flow rate, and a control unit (28) that controls an amount of disinfectant chemical added to the water (fig. 1, col. , lines 36-58). How the control unit controls the amount of chemical added is a process limitation and does not further structurally limit the apparatus.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ghalib US '404.

Regarding claim 60, Ghalib teaches a method for water disinfection, comprising the steps of: placing a disinfecting chemical dispenser (27) adjacent to a storm drain inlet, said disinfecting chemical dispenser configured to add a disinfection chemical into water flowing through the storm drain inlet, said disinfection chemical capable of reducing harmful pathogens in the water, measuring flow rate attributable to the water flowing through the storm drain inlet using at least one measuring means (30) which performs the identical function in substantially the same way with substantially the same results as the flow meter disclosed herein, determining an amount of disinfection chemical to add to the water flowing through the storm drain inlet based on the flow rate by a controller (28) connected to the disinfecting chemical dispenser, and adding said determined amount of said disinfecting chemical from the disinfecting chemical dispenser to the water flowing through the storm drain (fig. 1, col. , lines 36-58). Ghalib does not teach the chemical dispenser being portable. The fact that a claimed device is portable or movable is not sufficient by itself to patentably distinguish over an otherwise old device unless there are new or unexpected results *In re Lindberg*, 93 USPQ 23 (1952).

5. Claims 21, 54, 61, 62-64, 66-69 and 71-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ghalib '404 in view of Putz US 5 980 736.

Regarding claim 21, Ghalib teaches a wet and dry weather water disinfection system comprising: a storm water management infrastructure comprising a storm sewer comprising an inlet and flowingly coupled to a receiving body of water, a disinfecting chemical dispenser (27) located in line to the storm water management infrastructure where the chemical dispenser is configured to add a disinfectant chemical, a means (30) to measure water flow rate of water through the system, the flow sensor (30) performs the identical function in substantially the same way with substantially the same results as the flow meter disclosed herein, a control unit (28) that controls an amount of disinfectant chemical added to the water (fig. 1, col. 3, lines 36-58). How the control unit controls the amount of chemical added is a process limitation and does not further structurally limit the apparatus. Ghalib does not teach a sensor to measure water pollution characteristics. Putz teaches a wet and dry water disinfection system comprising a sensor (20, 21) configured to measure water pollution characteristics of the water (fig. 1, col. 3, lines 19-32, col. 4, lines 14-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the sensor of Putz with the apparatus of Ghalib because it provides values of the controller to accurately add treatment chemicals to the water (col. 4, lines 14-25).

Regarding claim 54, Putz further teaches the water pollution sensor is located upstream of a disinfection chemical dispenser (fig. 1).

Regarding claim 61, Ghalib teaches an automated in-line storm water disinfection system comprising: a monitor (30) for measuring flow rate of water through a water management infrastructure, a means for disinfecting water (27) which performs the identical function in substantially the same way with substantially the same results as the chemical dispenser disclosed herein, a control unit (28) located in-line to the water management infrastructure and electrically coupled to the flow rate monitor and to the disinfecting means and capable of dispensing disinfectant into water (fig. 1, col. 3, lines 36-58). How the control unit controls the amount of chemical added is a process limitation and does not further structurally limit the apparatus. Ghalib does not teach a sensor to measure water pollution characteristics. Putz teaches a wet and dry water disinfection system comprising a sensor (20, 21) configured to measure water pollution characteristics of the water (fig. 1, col. 3, lines 19-32, col. 4, lines 14-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the sensor of Putz with the apparatus of Ghalib because it provides values of the controller to accurately add treatment chemicals to the water (col. 4, lines 14-25).

Regarding claims 62-64, Ghalib further teaches a mixing chamber (23) (fig. 1); the mixing chamber comprises a bypass unit (fig. 1); and the water disinfecting means is a chemical dispenser (fig. 1).

Regarding claims 69 and 71-73, Putz further teaches the at least one sensor is upstream of the disinfecting means (fig. 2); the at least one sensor measures physiochemical and biological properties of the water (col. 4, lines 55-60); and the at least one sensor is a sensor array (20,21,26) (fig. 2).

Regarding claims 66-68, these claims do not cite any specific structure and only detail how the system operates as a process step. “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production or how it is used. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 227 USDQ 964 (1985).

6. Claims 76 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Putz '736 in view of O-Leary et al. US 4 659 459.

Regarding claim 76, Putz teaches an automated in-line wet and dry weather water flow disinfection system comprising: an in-line flow rate monitor (col. 7, lines 30-35), a chemical dispenser (23-25) for dispensing a disinfectant chemical, a control unit located in-line to a storm water management infrastructure and electrically coupled to the flow rate monitor and to the chemical dispenser and capable of controlling the amount of chemical disinfectant based on the flow rate, and at least one upstream sensor (20,21,46) coupled to the control unit (fig. 2). Putz does not at least one downstream sensor. O'Leary teaches a water disinfection system having a disinfection chemical dispenser with a control unit comprising a downstream sensor (118) from the disinfection chemical dispenser that measures water characteristics (fig. 1, col. 8, lines 15-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a downstream sensor as taught by O'Leary because the

downstream sensor relays information to the control unit to better regulate the amount of chemical added to the system (col. 2, lines 45-61).

Regarding claim 77, Putz in view of O-Leary teaches the system of claim 76 but does not teach the biologic properties further comprising the concentration of pathogenic microorganisms. It would have been obvious to one of ordinary skill in the art to use a sensor capable of detecting the concentration of pathogenic microorganisms because the system of Putz is configured to provide substances for disinfecting the water and it would be advantageous to adjust the amount of disinfectant substance added based on this characteristic of the water.

7. Claims 55 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ghalib '404 in view of Putz '736 as applied to claims 21 and 61 above, and further in view of O'Leary '459.

Regarding claims 55 and 70, Ghalib in view of Putz teaches the system of claim 21 and 61 but does not teach a downstream sensor. O'Leary teaches a water disinfection system having a disinfection chemical dispenser with a control unit comprising a downstream sensor (118) from the disinfection chemical dispenser that measures water characteristics (fig. 1, col. 8, lines 15-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a downstream sensor as taught by O'Leary because the downstream sensor relays information to the control unit to better regulate the amount of chemical added to the system (col. 2, lines 45-61).

8. Claim 65 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ghalib '404 in view of Putz '736 as applied to claim 61 above, and further in view of Brown et al. US 2003/0030011 A1.

Ghalib in view of Putz teaches the system of claim 61 but does not teach the water disinfecting means is a UV source or a UV spectrometer. Brown teaches that UV light is well known in the water purification art to disinfect water (paragraph 7) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a UV light source because it deactivates pathogens such as viruses, bacteria, fungus, microorganisms and other harmful substances (paragraph 7). Brown further teaches a sensor is a UV spectrometer interfaced with the product from via a fiber optic cable (paragraph 175). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the fiber optic cable interface as taught by Brown because they monitor the signals of UV light and are used to adjust and verify the operating parameters of the fluid treatment system (paragraph 174 and 175).

Response to Arguments

9. Applicant's arguments with respect to claims 21, 60, 61, 76, and 78 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN KURTZ whose telephone number is (571)272-8211. The examiner can normally be reached on Monday through Friday 8:00am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Benjamin Kurtz
Examiner
Art Unit 1797

3/4/08 /BK/

/Krishnan S Menon/
Primary Examiner, Art Unit 1797